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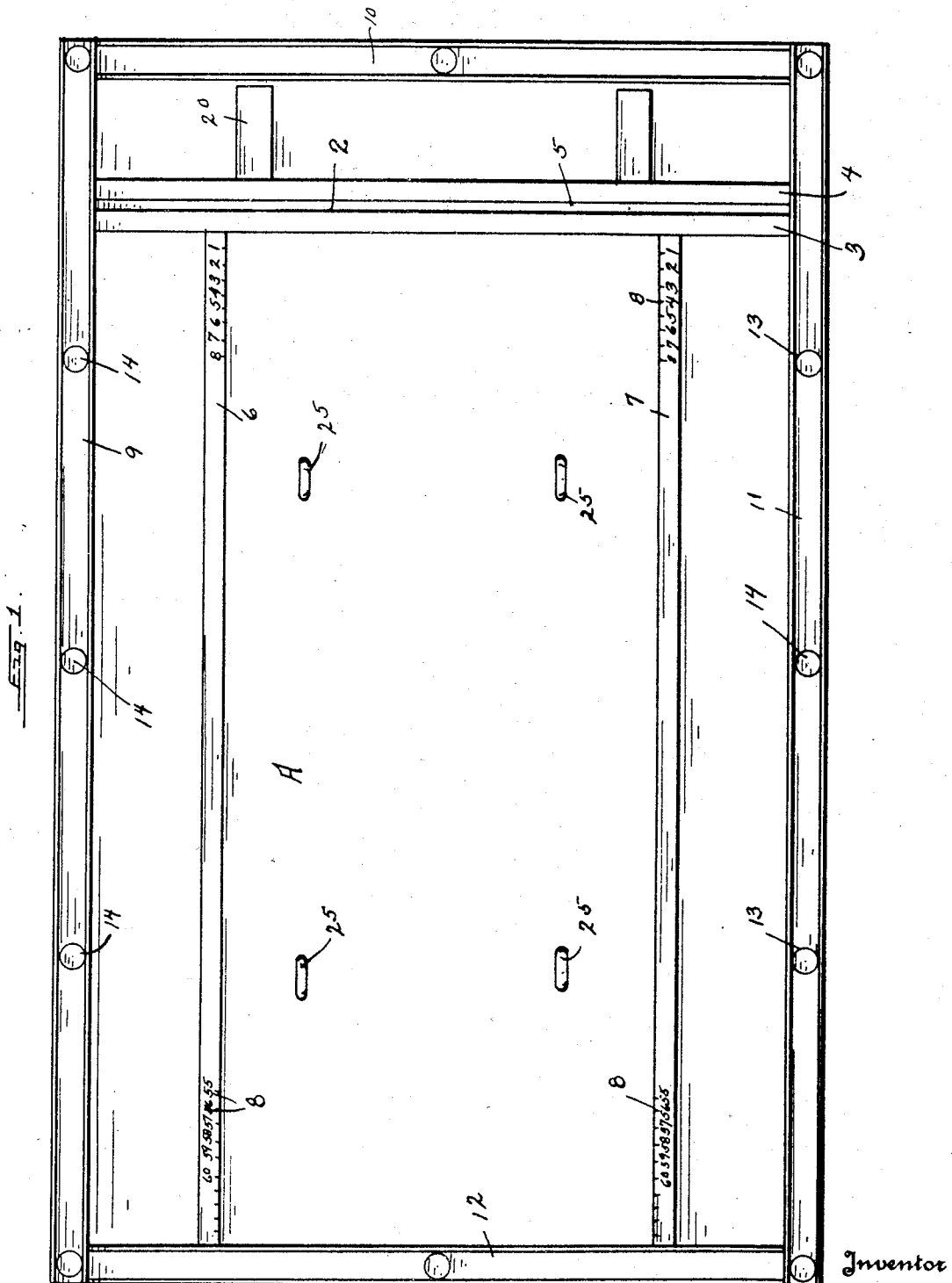
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DEVICE FOR STRAIGHTENING AUTOMOBILE BODIES AND FRAMES

Filed Aug. 23, 1927

3 Sheets-Sheet 1



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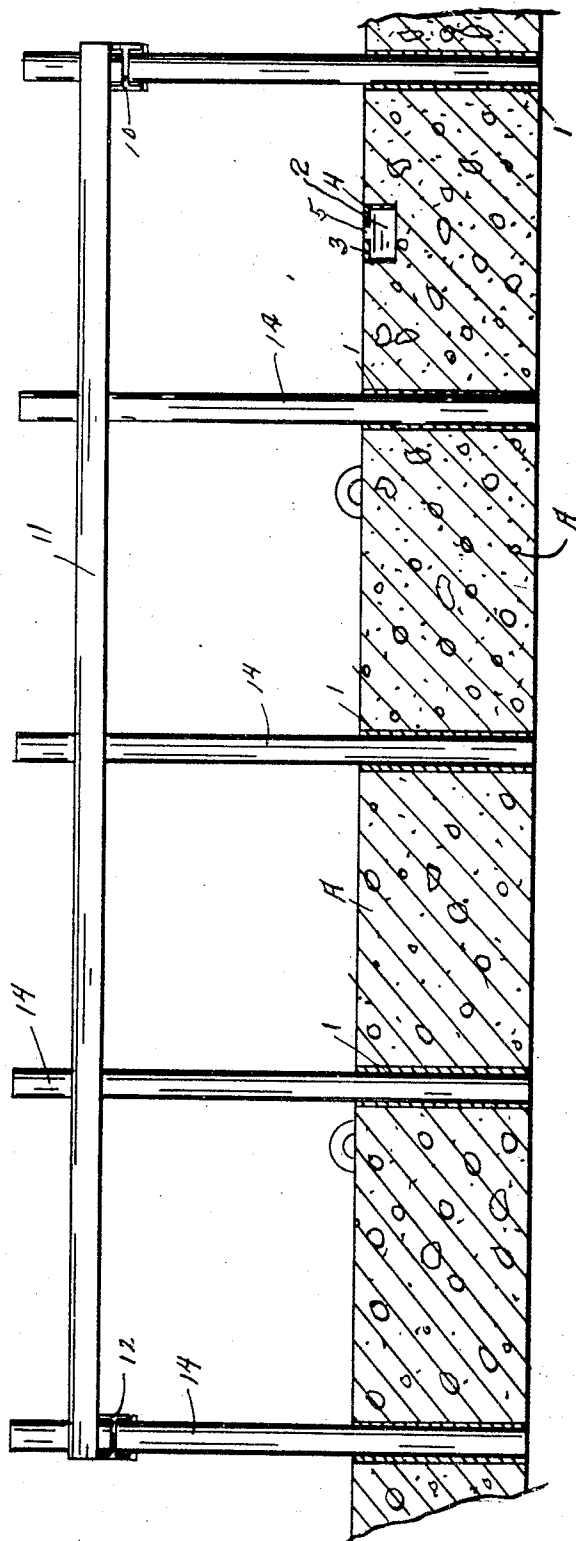
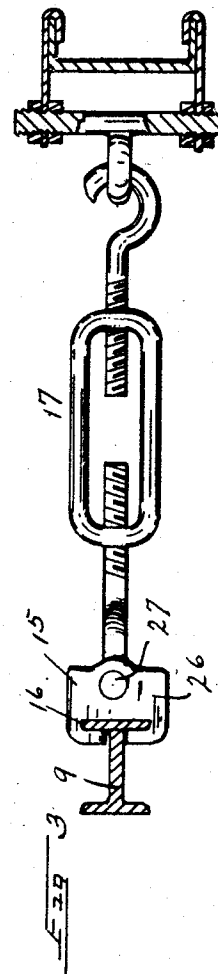
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DEVICE FOR STRAIGHTENING AUTOMOBILE BODIES AND FRAMES

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3 Sheets-Sheet 2

Fig. 2.



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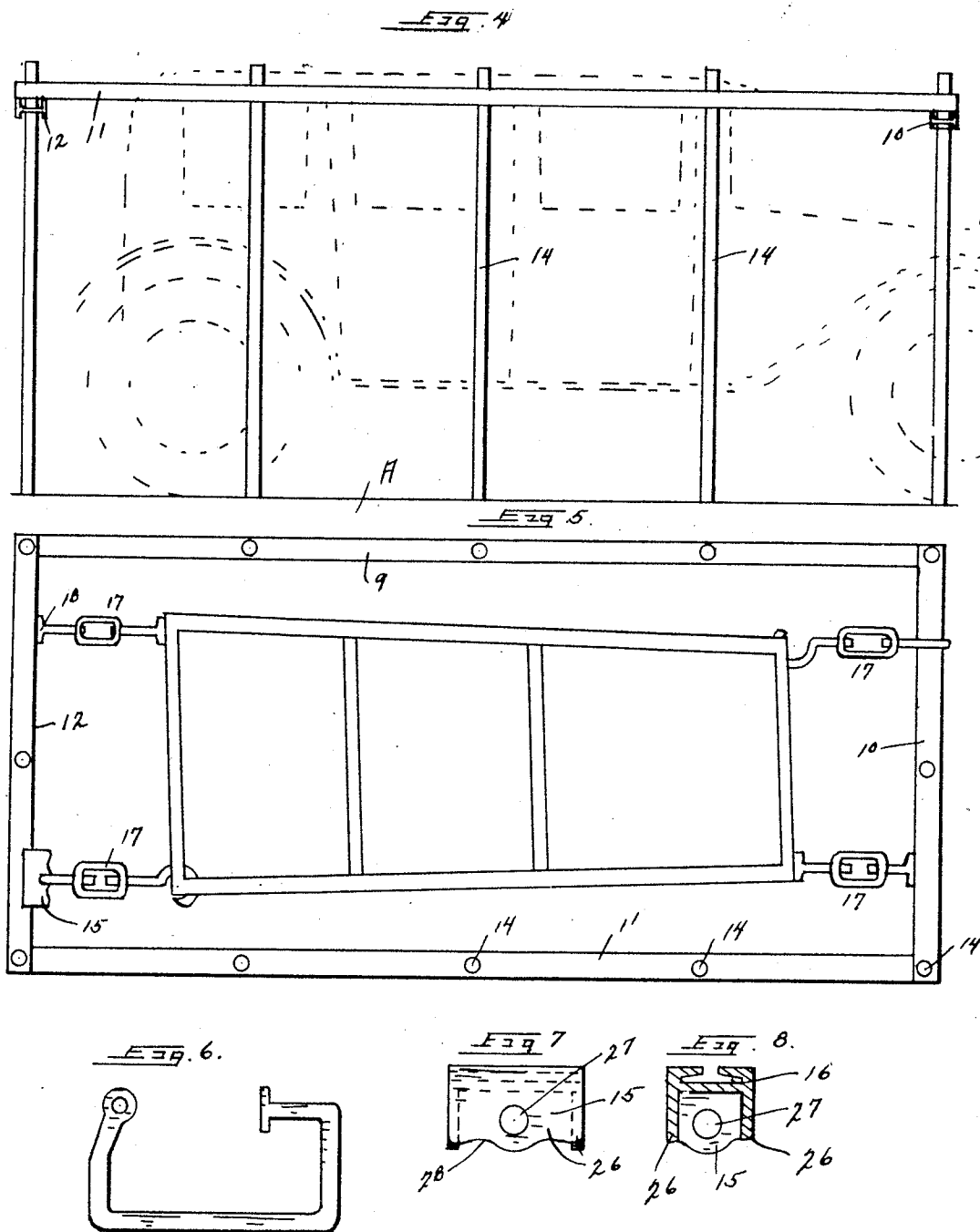
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DEVICE FOR STRAIGHTENING AUTOMOBILE BODIES AND FRAMES

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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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DEVICE FOR STRAIGHTENING AUTOMOBILE BODIES AND FRAMES

Application filed August 23, 1927. Serial No. 214,819.

My invention relates to automobiles and has for its object to provide a new and efficient device for straightening the frames of cars which have been in accidents and had the frame bent and misshapen from impact.

A further object is to provide a device for aligning the wheels of the car so that all four wheels are on direct alignment from each other and so that no wheel is back of or in front of the angle to which it was originally placed by the manufacturer.

A still further object is to provide a device for straightening, aligning and reshaping the bodies, as well as the frame, of the car so that when it has been repaired it is in the proper shape and in alinement.

As will be obvious, there are many other uses to which this device might be placed in straightening different parts of the automobile, such as axles, bodies, wheels, and many different types of tools will be necessary for use with this device which, if shown here, would cumber the invention and would not aid in the disclosure, but it is the intention of the inventor to use these tools in connection with his machine, and such deviations and modifications may be made in the use of this invention without departing from the spirit of the invention or the scope of the claims.

These objects I accomplish with the device illustrated in the accompanying drawings, in which similar numerals and letters of reference indicate like parts throughout the several views and as described in the specification forming a part of this application and pointed out in the appended claims.

In the drawings, in which I have shown the best and most preferred manner of building my invention, Figure 1 is a plan view of the floor plan of my invention. Figure 2 is a side elevation of the same, parts sectioned. Figure 3 is a view, parts shown sectioned, of one of the types of tools used in connection with the device. Figure 4 is a side elevation of the body straightening device showing a body therein in dotted lines, with the means used to straighten the body. Figure 5 is a diagrammatic plan view of the device with a car frame shown therein and shown twisted,

with the turnbuckles thereon ready to straighten it. Figure 6 is a view of another of the tools used, which tool is used to go in under the apron of the automobile and engage with the frame and by the screw pressure exerted by the turnbuckle to straighten the frame. Figure 7 is a side elevation of the member 15. Figure 8 is an end view of the same.

In the drawings, in which I have shown the invention, the floor A is made of concrete or some other similar material and has spaced apart tubular sockets 1 placed along the sides and across the ends. A cross member 2 is provided across the floor of the invention, composed of two spaced apart angle irons 3 and 4, imbedded in the concrete, and in the space 5 therebetween tools are adapted to be placed to engage with the automobile to aid in the straightening thereof. Longitudinal strips of metal 6 and 7 are set in said floor and each has markings 8 thereon which indicate the position of the wheels of the automobile when placed thereon. The said markings 8 are preferably numerals, and are in direct alinement with each other on each strip so that number 1 on the strip 6 is in alinement with number 1 on the strip 7. Along each side and across each end, I provide I-beams 9, 10, 11 and 12, which beams are bored through the webbing thereof with holes 13 adapted to fit over standpipes 14. The said standards or standpipes 14 are placed in the sockets 1 in the floor and stand vertical with the beams horizontal and at right angles thereto. The said beams are provided with many different types of tools, but each tool is provided with a sliding member 15 on one end thereof, having a socket 16 therein adapted to fit over and slide along one side of the said I-beams 9, 10, 11 and 12. The said member 15 is made in the shape of a rectangle, having four sides thereon, and with the back thereof forming the socket 16. The said sides 26 of the member 15 are each provided with a hole 27 therethrough, through which the hooks of the turnbuckles may be passed to engage therewith, and the front sides of the said sides 26 are provided with slight depressions 28 in which the forks of the push

turnbuckles may be placed when they are used in connection therewith. Gauge plates 20 are embedded in the floor A in front of the members 3 and 4, and are for the purpose of resting gauges thereupon when aligning and straightening the front axles of the automobile. The other hook of the turnbuckle is engaged with any of the different types of tools used to engage the different sections and portions of the automobile. Some of the turnbuckles 17 will be provided with flat jack heads 18 and will be used to push or force instead of pulling, as it is necessary to have some which pull and some which press or push.

The operation of my invention is as follows:

To align the wheels of a car, it is driven on the floor A, with the wheels resting upon the metal strips 6 and 7, and, as the strips are marked numerically, it will be obvious at a glance whether the wheels are in the proper positions and if they are not right but one side of the car is behind the other the frame can be secured and straightened, as shown in Figure 6, by pulling one side of the frame backward and forcing the other side forward. Eyebolts 25 are imbedded in the cement floor A, with just a small opening in the eye above the plane of the floor so that hooks may be engaged with the eyebolts to hold a car down while it is being worked upon. An eyebolt turnbuckle is engaged with the eyebolt 25 and the other end is engaged over the frame of the car securing the car to the floor, while the body or frame is being tightened.

To straighten the body of a car, the car is driven on the floor A and the long standards 14, as shown in Figure 4, placed in the sockets 1. Hook bolt turnbuckles are then engaged with the eyebolts 25 and with the frame of the car securing it rigidly to the floor. Then the necessary number of push turnbuckles and pull turnbuckles are applied in the same way as in the straightening of the frame, and the body is straightened and repaired.

Having thus described my invention, I desire to secure by Letters Patent and claim:

1. In a device of the class described, the combination of a support; spaced apart tubular sockets provided in said support; vertical standpipes adapted to fit into said sockets; beams having spaced apart holes therethrough adapted to fit over said standpipes; tool-engaging members slidable on said beams, having holes therethrough; means to hold or move certain parts of an automobile.
2. In a device of the class described, the combination of a support, having spaced apart metal strips imbedded longitudinally therein, each of said strips being marked numerically the same; spaced apart tubular sockets along the sides and ends thereof;

standpipes adapted to fit into said sockets; beams carried on said standpipes; tool-engaging members slidable on said beams; and tools to engage with said slidable members to hold, draw or push different parts of an automobile.

3. In a device of the class described, the combination of a support, having longitudinally imbedded strips spaced from each other with markings thereon; angle irons imbedded in said support spaced from each other and at right angles to said strips, with the space between said angle irons adapted to hold different tools for engagement with an automobile; eyebolts imbedded in the said support to which turnbuckles may be engaged to hold an automobile down while being worked upon; turnbuckles to engage with said eyebolts; standpipes imbedded in said supports; and beams having spaced apart holes therein to engage over said standpipes.

4. In a device of the class described, the combination of a support having longitudinally imbedded strips spaced from each other with markings thereon; angle irons imbedded in said support spaced from each other and at right angles to said strips, with the space between said angle irons adapted to hold different tools for engagement with an automobile.

5. In a device of the class described, the combination of a support having spaced apart metal strips imbedded longitudinally therein, each of said strips being marked numerically the same; spaced apart tubular sockets along the sides and ends thereof; standpipes adapted to fit into said sockets; eyebolts imbedded in said support; spaced apart angle irons imbedded in said support with the space between adapted to engage and hold tools for working on an automobile; plates imbedded in said support near one end thereof on which gauges may be placed to determine the correct angle of the axles of the automobile; beams carried on said standpipes; tool-engaging members slidable on said beams; and tools to engage with said slidable members to hold, draw or push different parts of an automobile.

In testimony whereof I have affixed my signature.

EMIL JOHNSON.